

1-7. (CANCELED)

8. (NEW) A method for diagnosing a machine, especially a transmission of a motor vehicle, by analysis of oil flowing within the machine to detect ferritic wear particles accumulated within the oil, the method comprising the steps of:

placing a reed contact (1) within an oil duct of the machine as part of a measurement system for diagnosing the machine;

detecting accumulation of the ferritic wear particles within the oil; and

using an output signal of the reed contact (1) as an indication of a condition of the machine.

9. (NEW) The method according to claim 8, further comprising the step of using a sensor, built into an oil duct (4) of the machine, as part of the measurement system and arranging a capturing magnet (2) in a lower region of the oil duct (4) with the reed contact (1) located opposite thereto in an upper region of the oil duct (4).

10. (NEW) The method according to claim 8, further comprising the step of producing a magnetic flux density, via the capturing magnet, through a cross-section of the oil duct (4), and changing the magnetic flux density due to accumulation of the ferritic wear particles (2) that accumulate on a surface of the capturing magnet (2), and detecting the change in the magnetic flux density by the reed contact (1) in such manner that a binary measurement signal is produced which produces a measurement indicative of the condition of the machine.

11. (NEW) The method according to claim 10, further comprising the step of adjusting an effectiveness and a sensitivity of the sensor by virtue of positioning and technical characteristics of the capturing magnet (2) and the reed contact (1), and the sensor to adapt the measurement system for a different environment.

12. (NEW) The method according to claim 8, further comprising the step of using one of a permanent magnet and an electromagnet as the capturing magnet (2).

13. (NEW) The device for implementing the method according to claim 8, further comprising the step of on the lower side of the oil duct (4) is arranging a capturing magnet (2) on a surface where the ferritic wear particles (3), to be detected, will accumulate, and arranging a reed contact (1) in an the upper region of the oil duct (4) and generating a binary output signal which is indicative of the condition of the machine.

14. (NEW) The device according to claim 13, further comprising the step of using one of a permanent magnet and an electromagnet as the capturing magnet (2).

15. (NEW) A method for diagnosing a transmission of a motor vehicle by analyzing oil flowing within the transmission and detecting ferritic wear particles which accumulate within the oil during operation of the transmission, the method comprising the steps of:

placing a reed contact (1) within an oil duct of the transmission with a capturing magnet (2) located opposite the reed contact (1),

accumulating the ferritic wear particles on the capturing magnet (2); and

using an output signal of the reed contact (1) as an indication of a condition of the transmission for determining when servicing of the transmission is necessary.

16. (NEW) The method according to claim 15, further comprising the step of using a sensor, built into an oil duct (4) of the transmission, as part of the measurement system and arranging a capturing magnet (2) in a lower region of the oil duct (4) with the reed contact (1) located opposite thereto in an upper region of the oil duct (4).

17. (NEW) The method according to claim 15, further comprising the step of producing a magnetic flux density, via the capturing magnet, through a cross-section of the oil duct (4) with the magnetic flux density changing due to accumulation of the ferritic wear particles (2) on a surface of the capturing magnet (2),

detecting the change in the magnetic flux density by the reed contact (1),  
and

producing a binary measurement signal which is indicative of the condition of the transmission.

18. (NEW) The method according to claim 15, further comprising the step of adjusting an effectiveness and a sensitivity of the sensor by virtue of positioning and technical characteristics of the capturing magnet (2) and the reed contact (1), and the sensor to adapt the measurement system for a different environment.

19. (NEW) The method according to claim 15, further comprising the step of using one of a permanent magnet and an electromagnet as the capturing magnet (2).

20. (NEW) The method according to claim 16, further comprising the step of producing a magnetic flux density, via the capturing magnet, through a cross-section

of the oil duct (4) with the magnetic flux density changing due to accumulation of the ferritic wear particles (2) on a surface of the capturing magnet (2),

detecting the change in the magnetic flux density by the reed contact (1),

and

producing a binary measurement signal which is indicative of the condition of the transmission.

21. (NEW) The method according to claim 20, further comprising the step of adjusting an effectiveness and a sensitivity of the sensor by virtue of positioning and technical characteristics of the capturing magnet (2) and the reed contact (1), and the sensor to adapt the measurement system for a different environment.

22. (NEW) The method according to claim 21, further comprising the step of using one of a permanent magnet and an electromagnet as the capturing magnet (2).

23. (NEW) A method for diagnosing a transmission of a motor vehicle by analyzing oil flowing within the transmission and detecting ferritic wear particles which accumulate within the oil during operation of the transmission, the method comprising the steps of:

placing a reed contact (1) in an upper region of an oil duct (4) of the transmission and locating a capturing magnet (2), opposite from the reed contact (1), in a lower region of the oil duct (4);

accumulating the ferritic wear particles on the capturing magnet (2) and producing a magnetic flux density, via the capturing magnet (2), over a cross-section of the oil duct (4) with the magnetic flux density changing due to accumulation of the ferritic wear particles (2) on a surface of the capturing magnet (2);

using a sensor, built into an oil duct (4) of the transmission, as part of the measurement system;

detecting the change in the magnetic flux density by the reed contact (1) and producing an output signal from the reed contact (1) which is indicative of a condition of the transmission for determining when servicing of the transmission is necessary; and

displaying, via an indicator, that servicing of the transmission is required.